

What is claimed is:

1. A light emitting diode light source, comprising:

a printed circuit board with a plurality of side faces;

a plurality of RGB LED units arranged on one side face of the printed

5 circuit board, each LED unit having a red LED, a green LED and a blue LED;

at least one control unit connected to each LED in the RGB LED units and
controlling a driving current to the LED, whereby each of the RGB LED units
emits a white light with stable color temperature.

2. The light emitting diode light source as in claim 1, wherein the LED

10 has an anode and a cathode connected to two pads on each of the RGB LED
units, and the pads are electrically connected to corresponding control unit.

3. The light emitting diode light source as in claim 1, wherein the control
unit has a memory for storing driving current data for each LED.

4. The light emitting diode light source as in claim 1, wherein the control

15 unit is a control IC.

5. The light emitting diode light source as in claim 1, wherein the printed
circuit board is made of a material of good thermal conductivity.

6. The light emitting diode light source as in claim 5, wherein the printed
circuit board is made of Al.

20 7. The light emitting diode light source as in claim 5, wherein the printed
circuit board is made of Cu.

8. The light emitting diode light source as in claim 1, wherein the control unit comprises a red-light control unit connected to a red LED, a green-light control unit connected to a green LED and a blue-light control unit connected to a blue LED.

5 9. The light emitting diode light source as in claim 8, wherein the red-light control unit connected to the red LED, the green-light control unit and the blue-light control unit have pin numbers identical to a pin number of the RGB LED unit.

10 10. The light emitting diode light source as in claim 8, wherein the red-light control unit connected to the red LED, the green-light control unit and the blue-light control unit have pin numbers larger than the pin number of the RGB LED unit.

11. The light emitting diode light source as in claim 1, wherein the control unit is connected in parallel with a corresponding LED.

15 12. The light emitting diode light source as in claim 1, wherein the control unit is connected in series with a corresponding LED.

13. The light emitting diode light source as in claim 1, wherein the control unit has at least three pins for controlling a driving current for the red LED, the green LED and the blue LED.

20 14. A light emitting diode light source, comprising :
a printed circuit board with a plurality of side faces;

a plurality of LED units arranged on one side face of the printed circuit board and each having a first LED with a first color and a second LED with a second color different from the first color;

at least one control unit connected to each LED in the LED units and
5 controlling a driving current to the LED, whereby each of the LED units emits a light with stable color.

15. The light emitting diode light source as in claim 14, wherein the LED has an anode and a cathode connected to two pads on each of the LED units, and the pads are electrically connected to a corresponding control unit.

10 16. The light emitting diode light source as in claim 14, wherein the control unit has a memory for storing a driving current data for each LED.

17. The light emitting diode light source as in claim 14, wherein the control unit is a control IC.

15 18. The light emitting diode light source as in claim 14, wherein the printed circuit board is made of a material of good thermal conductivity.

19. The light emitting diode light source as in claim 18, wherein the printed circuit board is made of Al.

20. The light emitting diode light source as in claim 18, wherein the printed circuit board is made of Cu.

20 21. The light emitting diode light source as in claim 14, wherein the control unit is connected in parallel with a corresponding LED.

22. The light emitting diode light source as in claim 14, wherein the control unit is connected in series with a corresponding LED.

23. The light emitting diode light source as in claim 1, wherein the control unit has at least two pins for controlling a driving current for the first LED and
5 the second LED.

24. A light emitting diode light source, comprising:
a printed circuit board with a plurality of side faces;
a plurality of LED units arranged on one side face of the printed circuit board and each having an LED;

10 at least one control unit connected to each LED in the LED units and controlling a driving current to the LED, whereby each of the LED units emits a light with stable color.

25. The light emitting diode light source as in claim 24, wherein the LED has an anode and a cathode connected to two pads on each of the LED units,
15 and the pads are electrically connected to a corresponding control unit.

26. The light emitting diode light source as in claim 24, wherein the control unit has a memory for storing a driving current data for each LED.

27. The light emitting diode light source as in claim 24, wherein the control unit is a control IC.

20 28. The light emitting diode light source as in claim 14, wherein the printed circuit board is made of a material of good thermal conductivity.

29. The light emitting diode light source as in claim 28, wherein the printed circuit board is made of Al.

30. The light emitting diode light source as in claim 28, wherein the printed circuit board is made of Cu.